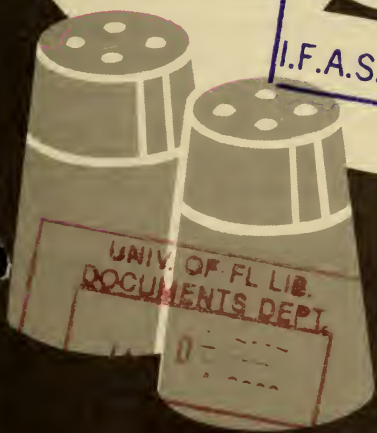
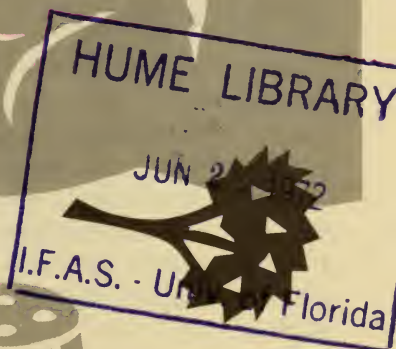
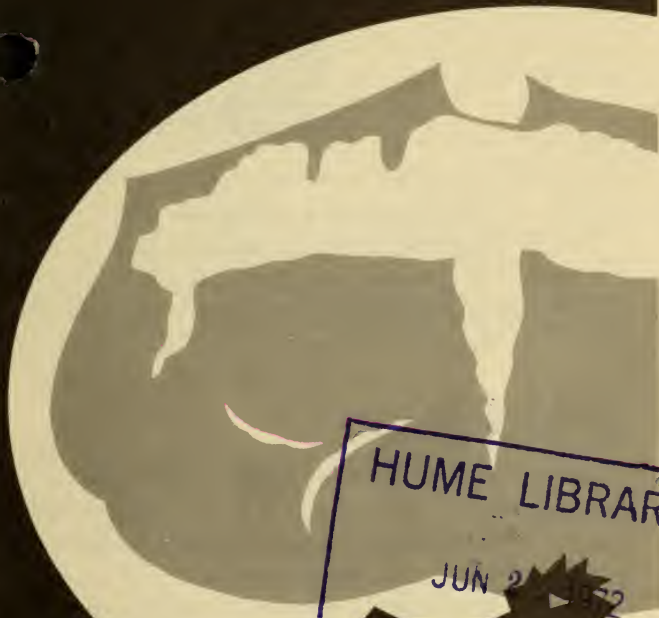


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How to Buy POTATOES



U.S. DEPARTMENT OF AGRICULTURE

How to Buy POTATOES



*By Laurence E. Ide, Head
Fresh Products Standardization
Fruit and Vegetable Division
Consumer and Marketing Service*

INTRODUCTION

Boiled, baked or fried; hot or cold; plain or fancy—potatoes are one of our most popular vegetables. In fact, each American eats about 60 pounds of fresh potatoes each year.

To help assure quality in the potatoes you buy, the U.S. Department of Agriculture has established grade standards for potatoes. U.S. No. 1 is the grade or quality level you will find in most retail stores.

USDA provides a voluntary grading service to growers, shippers, wholesalers, and others, for a fee. About 65 percent of the potatoes that are marketed fresh are officially graded in producing areas (at the packing plant from which they are shipped to market) by USDA's Consumer and Marketing Service in cooperation with State agencies.

The U.S. grades are a good guide to quality and were revised to give you better potatoes than before. This booklet describes the revised standards and gives other useful tips on buying, handling, and storing potatoes. It also explains how potatoes are handled from digging to packing.

POTATO GROWING AND MARKETING

Potatoes are produced in every State, but about half of the commercial crop is grown in Idaho, Maine, California, and Washington.

Most of our year-round supply of fresh potatoes is harvested in September or October. These fall crop potatoes are stored for 1 to 9 months before shipment to retail outlets.

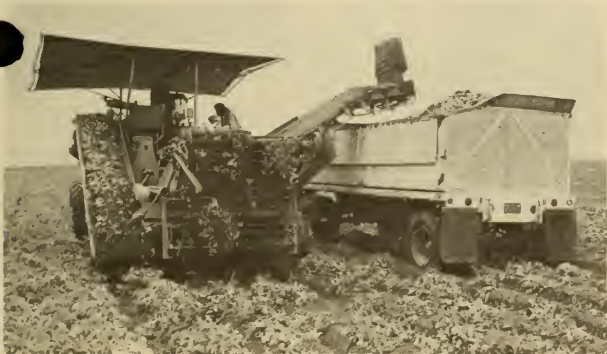
Many potatoes, however, are freshly harvested and marketed from January through September. These are called "new" potatoes. This term is also used to describe freshly-dug fall crop potatoes which are not quite fully matured.

Most harvesting is done by potato combines which dig the potatoes out of the ground and move them up a conveyor that shakes them, allows soil to drop through, and conveys the potatoes directly into containers or trucks. Usually several workers on the combine pick out any vines, stones, or other debris. A few harvesters also have built-in devices for removing debris.

Potatoes are usually brushed or washed at the packinghouse. Dirty potatoes are unattractive, and the dirt itself contributes weight for which the buyer is paying.

After cleaning, potatoes are mechanically sized and are then sorted into grades by packinghouse workers. The potatoes are packed according to grade and size. The grade is often certified during packing by Federal-State inspectors.

Over 40 percent of the fresh potatoes are now marketed at retail stores in consumer unit packages—generally 5, 10, 15, or 20 pound bags.



Common types of bags are film (mostly polyethylene), open mesh, paper with mesh or film window, or plain paper. The trend is toward packing so the shopper can see the contents.

Potatoes may be packaged in consumer units at the packinghouse (at shipping point) or at wholesale houses in city terminal markets. Retail chains also do a good deal of packing in consumer units in their central warehouses.

Packing is largely mechanized, and bags are generally check-weighed afterwards to ensure that they are slightly overweight and thus allow for shrinkage in marketing.

Red potatoes and some white varieties are sometimes treated with colored or clear wax before shipment to improve their appearance. The Food and Drug Administration requires that potatoes so treated be plainly marked. Under the Federal Food, Drug, and Cosmetic Act, it is illegal to color "white"-skinned potatoes red or to use colored wax to make potatoes appear fresher or of better quality. Several producing States have banned all use of artificial color.





U.S. GRADES

The first U.S. quality standards for potatoes were developed in 1917 to help potato growers and shippers market their product in wholesale channels. At that time, most potatoes were sold in bulk.

Since then, most potatoes have been marketed under the U.S. No. 1 grade, and bags of potatoes in retail stores are often labeled U.S. No. 1.

The U.S. grade standards have been revised a number of times through the years to keep up with changes in production and marketing practices and in consumer preferences.

In recent years, however, consumers have complained that a bag of U.S. No. 1 potatoes had too wide a range of sizes; that the potatoes weren't clean enough; and that cuts, bruises, and other defects caused too much waste. Some growers, packers, and shippers also believed that the U.S. No. 1 grade covered too wide a range of quality.

So the Consumer and Marketing Service has again revised the grade standards for potatoes.

Effective September 1, 1971, the revised standards are intended to result in cleaner, more uniformly sized potatoes with fewer defects.

To provide for some margin of error in sizing, grading, cleaning, and packing potatoes, the standards permit a small percentage of offsize or undergrade potatoes in all grades. Before setting tolerances for defects, for example, USDA studies how much damage is reasonable because mechanical harvesting and packing practices in themselves cause a certain amount of unavoidable cuts, bruises, and other defects.

The new standards replace the previous top grade, U.S. Fancy, with a new grade, *U.S. Extra No. 1*. U.S. Fancy was seldom used by the potato industry because the requirements were too strict; a very small percentage of the potato crop could meet the grade.

Now, U.S. Extra No. 1 potatoes are the premium grade for consumers who want to buy the

best. The tolerances for defects are stricter than those for U.S. No. 1, and potatoes in this grade can only be slightly affected by internal defects or sprouts. The minimum size is $2\frac{1}{4}$ inches in diameter or 5 ounces in weight. Variation in size of potatoes within a package is limited. Generally, they must vary by no more than $1\frac{1}{4}$ inches or 6 ounces.

Under the revised standards, consumers will also find that potatoes marked *U.S. No. 1* are better than before.

The revision reduces the tolerances for defects so that there will be fewer potatoes with cuts, bruises, sprouts, or decay in consumer packages.

In addition, the revision sets up optional size designations which packers may use. If potatoes are labeled with these size designations, they must be within the size ranges shown on the next page.

The consumer might also find U.S. No. 1 potatoes labeled Size A. Such potatoes must be at least $1\frac{7}{8}$ inches in diameter, and 40 percent of the potatoes must be $2\frac{1}{2}$ inches in diameter or 6 ounces in weight or larger.

If the size is not designated, the minimum for U.S. No. 1 potatoes is $1\frac{7}{8}$ inches in diameter; there is no maximum.

Use of the U.S. grade standards or the Federal-State Inspection Service is voluntary, except where required by State law or certain regulations.

The inspection service, operated jointly by USDA's Consumer and Marketing Service and cooperating State agencies, offers official, impartial, third-party inspection of potatoes, on a fee basis. Shipping point inspection establishes what the quality is at time of shipment, both for sales purposes and for verifying compliance with contract terms. Some packers also find official inspection valuable as a quality-control tool.

Although grade labeling is not required by Federal law, even when potatoes have been officially graded, the U.S. grade is often shown on consumer packages in retail stores. Sometimes, packers label their potatoes by grade whether the potatoes were officially graded or not. But these potatoes should meet the standards if they are so labeled.

Range Under Optional Sizing

Minimum

Maximum

Small



1 $\frac{3}{4}$ inches

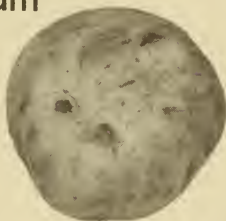


2 $\frac{1}{2}$ inches
or 6 ounces

Medium



2 $\frac{1}{4}$ inches
or 5 ounces

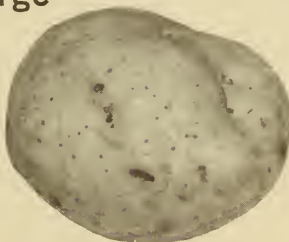


3 $\frac{1}{4}$ inches
or 10 ounces

Large



3 inches
or 10 ounces



4 $\frac{1}{4}$ inches
or 16 ounces

Range If Size Is Not Designated



1 $\frac{7}{8}$ inches
(minimum)



(no maximum)

USDA and cooperating State agencies also offer continuous inspection, which means an inspector checks the entire packing operation as well as the quality of the product. If potatoes are packed under continuous USDA inspection, the grade name may be shown within the official shield.



TYPES OF POTATOES

Varieties of potatoes are classified by their shape and skin color. Potatoes are long or round, and their skins may be "white" (the regular white to buff color), red, or russet (normally having a brownish, rough, scaly or netted skin).

The principal varieties are the Russet Burbank (long russet), the White Rose (long white), the Ka-

tahdin (round white), and the Red Pontiac (round red). Other varieties are available in different regions at specific times of the year, and some new varieties such as the Norgold Russet (a long to blocky, lightly russeted potato) and the Norland (a round red) are becoming increasingly popular.

As far as the consumer is concerned, potatoes can also be classified by use. There are “new” potatoes, general purpose potatoes, and baking potatoes.

“New” potatoes are best when boiled. They are generally harvested before the skins have “set” and because of immaturity may be “skinned” or “feathered” during handling.

General purpose potatoes, both round and long types, comprise the great majority of supplies. They are available year-round. As the term implies, they are used for boiling, frying, and baking.

Potatoes grown specifically for their baking quality are also available. The most widely grown and best known baking potato is the Russet Burbank.

BUYING TIPS

The revision of the U.S. standards is an attempt to bring the quality of potatoes more into line with what consumers want. So potatoes in bags labeled U.S. No. 1 now should be cleaner and firmer and have fewer defects than in the past.

When shopping for potatoes, look for those that are firm, well shaped, and smooth, with few eyes.

The potatoes should be free from large cuts, growth cracks, bruises, skinned areas, and decay. Some amount of skinning is normal in new potatoes, but avoid new potatoes with large skinned and discolored areas.

Don't buy potatoes that are green. Greening is caused by exposure to natural or artificial light. Sometimes only the skin is affected, but greening may penetrate the flesh. The green portions contain the alkaloid solanin which causes a bitter flavor and is said to be poisonous to some people.

Also avoid badly sprouted or shriveled potatoes.

You may find potatoes with second growth. These irregular, knob-shaped growths are consid-

ered defects because they are likely to cause quite a bit of waste.

A “smell test” can also help you select potatoes. If the potatoes smell musty or moldy, the flavor may be affected.

It is impossible to detect internal defects without cutting the potato, but if you find that some of the potatoes you have bought are hollow in the center or have severe internal discoloration, take them back to your grocer for replacement.

Consumer unit bags generally carry information about the contents such as the type and origin of the potatoes, the grade, and the weight.

HANDLING AND STORAGE TIPS

Potatoes are nearly as delicate as apples. They can get bruised all the way from the digging machine in the field to your home storage bin. So handle the potatoes you buy with care.

If stored properly, general purpose and baking potatoes will keep for several months; new potatoes will keep for several weeks.

Look potatoes over before you store them. Set aside any that are bruised or cracked and use them first.

Don't wash potatoes before you store them. As it does with most other fresh produce, dampness increases the likelihood of decay.

Store potatoes in a cool (45° to 50° F., if possible), dark place, with good ventilation.

Potatoes stored at 70° to 80° F. should be used within a week. The higher temperature often causes sprouting and shriveling.

Potatoes stored below 40° F. for a week or more may develop a sweet taste because some of the starch changes to sugar. To improve their flavor, store them at a higher temperature for 1 to 2 weeks before using them.

QUESTIONS ABOUT POTATOES

Are potatoes more fattening than other foods? No. A boiled, pressure-cooked, or baked medium-sized potato provides only about 100 calories (approximately the same amount as a large apple or ba-

nana) and has no more carbohydrate value than these fruits. It's the fats, gravies, and sauces commonly served with potatoes that increase the calories. Fried potatoes, for example, may be 2 to 4 times as high in calories as a plain baked potato.

What can I do if I can't find bags of medium-sized potatoes at my store? Ask your grocer to get them or pick them from the bulk display.

What causes internal defects? One internal defect, hollow heart (an irregular hole at the center of the potato) is caused by excessively rapid growth.

Another common internal defect is internal discoloration. Internal discoloration may be caused by improper field or storage conditions, freezing, or disease. Each causes a different type of discoloration. Do not use potatoes with severe internal discoloration.

Why is the flesh red in some red-skinned potatoes? These potatoes were probably artificially colored. Some packers believe the coloring makes the potatoes more attractive to consumers.

Under the revised U.S. No. 1 grade, artificial coloring which is unsightly, which conceals any other defects that cause damage, or which causes more than 5 percent waste when removed is considered a defect. If you find that coloring has penetrated the flesh and causes excessive waste, return the potatoes to your grocer.

What should I do if I find a rock in a bag of potatoes? Simply return the rock to your grocer, who will give you the rock's weight in potatoes. Rocks sometimes get into bags of potatoes because most harvesting and packing today is done by machine. Many rocks resemble potatoes in both shape and color.

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POTATOES

BUY THE TYPE YOU NEED

- There are three types:
“new” potatoes (for boiling)
general purpose potatoes
baking potatoes

CHECK THE QUALITY

- Look for potatoes that are firm, well shaped, smooth (with small eyes), and free from large cuts or bruises.
- Avoid potatoes that are green or badly sprouted or shriveled.

LOOK FOR THE U.S. GRADE NAME

- U.S. No. 1 potatoes are of good quality and are the grade most commonly seen in consumer packages.
- If potatoes are packed under continuous USDA inspection, the grade name may appear within the official shield.



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